

WebQuests for English-Language Learners: Essential Elements for Design

WebQuests that are rated highly for content may lack design features that address the needs of English-language learners, but the use of adapted and customized WebQuests can help.

Amanda Sox | Eliane Rubinstein-Ávila

The rapidly changing world of technology, the pressure to incorporate technology across content areas, and the need to adapt instruction for English-language learners (ELLs) in secondary classrooms present daily challenges for secondary educators, who are also expected to prepare students for productive lives ahead. Often it may seem as if there is not enough time in the instructional day. Therefore, in this article the authors advocate for the use of WebQuests—Web-based interdisciplinary collaborative learning units—for their potential to integrate technology, content knowledge, and comprehensible input for secondary ELLs.

Moreover, content area teachers at the secondary level are less likely than elementary school teachers to have training on the integration of language and literacy development across subjects (Rubinstein-Ávila & Johnson, 2008). In spite of the demographic increase of students in 6th to 12th grades for whom English is an additional language, second-language acquisition theories and sheltered instruction strategies are still not being integrated across all teacher education courses. Consequently, single-subject educators may often feel at a loss in classrooms where several students are likely to be on a wide continuum of developing English-language competencies and probably also on a wide content knowledge continuum (anywhere from above U.S. grade level to several grade levels behind).

Therefore, we set out to evaluate eight existing WebQuests for their appropriateness to address the linguistic needs of ELLs. Given the low incidence of strategies found by Sox (author), we propose a rubric to be used alongside existing rubrics suggested by Dodge (2001) and March (2008). Our proposed rubric draws on second-language acquisition (SLA) theories and new literacies studies (NLS) and focuses on the linguistic, multimedia, and organizational features of WebQuests, features that are particularly helpful for ELLs. Finally, we provide suggestions for adapting existing WebQuests and for designing them to meet the needs of ELLs.

What Are WebQuests?

WebQuests are Web-based interdisciplinary learning units that foster collaborative problem solving as students work on a task, resulting in a cumulative project. Most existing WebQuests have been developed and posted by classroom teachers. The WebQuest tasks often simulate real-world situations, requiring students to take on particular roles, design a blueprint, persuade others of a particular point of view, or come to consensus to develop a policy, mission statement, or sales pitch. Because of their flexibility, we contend that WebQuests have great potential for accommodating diverse learners—especially ELLs—while creating academically challenging activities that encourage the development of academic language development, Internet inquiry, and critical and higher order reasoning. Thus, WebQuests incorporate both teacher- and student-centered aspects, providing all students with opportunities to engage collaboratively with one another, and plenty of possibilities to interact efficiently with the World Wide Web.

Typically, WebQuests provide small groups of students with the opportunity to delve into particular topics in depth by completing tasks that culminate in a final product. Students are asked to synthesize knowledge and conduct further inquiries to create a group product, which is eventually shared with their peers. The final product can incorporate multiple modalities. For example, a high school literature WebQuest called *Things Fall Apart* requires that students synthesize the information gathered and identify the five most important issues relating to the social context in a particular novel. Ultimately, students are asked to work in pairs to create a role-play interview through which to present the issues to the class.

Basic elements of WebQuest design include a title page, introduction, explanation of the task, list of relevant resources and links, and a set of step-by-step instructions for completing the cumulative task. Assessment of the WebQuest task is also included, usually in the form of a rubric (Molebash & Dodge, 2003). March (2003) underscored that the WebQuest task should be developmentally appropriate and require collaborative problem solving rather than simply eliciting rote text comprehension tasks. The task should integrate multiple competencies and provide

cooperative as well as individual learning opportunities for student engagement (Maddux & Cummings, 2007; March, 2003).

Although youth are often perceived as being cyber-savvy, perhaps because many can be seen text messaging, downloading songs, and playing video games (at times simultaneously), several studies point out that many students—especially low-income students—may be “low users” of technology (Facer & Furlong, 2001). These youth may interact with cyber technology only in the most basic ways, both in the classroom and at home (Lengel & Lengel, 2006; Ware & Warschauer, 2005). Therefore, if we as educators expect to prepare students adequately for present and future demands, technological literacy should be taught explicitly and integrated into content area learning in meaningful ways (Gee, 2000; Lankshear & Knobel, 2004; Lengel & Lengel, 2006). There are several portals on the Internet that provide guidance for creating WebQuests (Figure 1).

Cummins (2000) also has suggested that the World Wide Web has great potential for providing ELLs the visual and aural stimulation to render new concepts more comprehensible. By giving ELLs the opportunity to engage with content knowledge in multiple modalities, students are more likely to expand their competencies as they “collect, internalize, and consolidate their knowledge of language and then use it powerfully to extend their intellectual horizons and personal identities” (Cummins, 2000, p. 544). Considering the number of ELLs in 6th to 12th grade classrooms across the country, WebQuests are to be viewed as a resource for developing students’ technological, content area literacy and English-language competencies.

Theoretical Approaches

NLS scholars contend that literacy constitutes multiple modes and social practices. NLS approach literacy from a sociocultural perspective. Rather than viewing literacy as a set of purely cognitive skills to be mastered by the individual, NLS advocate the incorporation of a broad range of practices, signs, symbols, and modes. According to Lengel and Lengel (2006), students should be able to use different sources to find information, identify multiple perspectives, and

Figure 1 Suggested WebQuest Portals

www.questgarden.com

- Step-by-step assistance for creating WebQuests, including news and information about WebQuests
- A search engine that allows searches by grade level and/or subject area
- Publication and modification dates of each WebQuest

For a small annual subscription fee, one has access to downloading posted WebQuests for the purpose of adapting them, as well as publishing and archiving their own WebQuests on the portal.

www.BestWebQuests.com

- Star ratings of WebQuests posted all over on the Internet
- Has a search engine
- Articles by Tom March and resources and helpful tips for creating/evaluating your own WebQuests
- Links to other websites, supported by Tom March, about WebQuests

For a fee, Tom March will provide one-on-one feedback on your own WebQuests.

webquest.org

- The original WebQuest portal supported by San Diego State University
- Numerous articles, guides, and Dodge's rubric for creating quality WebQuests
- Search engine identical to QuestGarden, but contains some older WebQuests

evaluate the quality and authority of sources. In addition, NLS advocate the development of multiple competencies for active and critical participation in an increasingly global society (Gee, 2000; Lankshear & Knobel, 2004). The use of WebQuests across secondary content area classes enables the incorporation of these multiple aspects of literacy because the tasks and the final product require students to incorporate, integrate, and extend information from several Internet sources. In addition, students are expected to evaluate which sources best suit the purpose of completing a particular task successfully.

SLA scholars have stressed the importance of attending to the cognitive, linguistic, emotional, and social aspects of students' acquisition and development of a second language. Krashen (1980) and others (Echevarria & Graves, 2007) proposed that ELLs do best when language competencies are integrated with

and taught through academic content. By relying on sheltered content instruction (SCI), single-subject educators can create lessons that are rich in *comprehensible input*, Krashen's term for adapting content information for ELLs. Students who are in the process of acquiring a new language while also engaging with new content also need ample opportunities to participate in meaningful verbal exchanges with peers in academic settings to develop academic English proficiency (Echevarria & Graves, 2007; McGraw & Rubinstein-Ávila, 2008). These exchanges are likely to foster deeper levels of reasoning and understanding and foster the integration of content knowledge and language development (Chamot & O'Malley, 1994; Echevarria, Vogt, & Short, 2000).

Therefore, the presentation of WebQuest tasks to ELLs is essential. Echevarria et al. (2000) emphasized that students who are on a wide continuum of developing English-language proficiency require clear directions and more comprehensible and manageable tasks. They also recommended the incorporation of visuals, such as realia, documentaries, and films, as well as an array of genres, such as diaries, newspaper articles, and fiction. Emphasis on key content vocabulary, the use of think-alouds, and modeling correct language usage are also essential to increase comprehensible input (Echevarria & Graves, 2007; Echevarria et al., 2000).

Related Literature

Although there have been numerous publications about WebQuests in the last few years, the majority have been either conceptual or descriptive (Halat, 2008; Kahl & Berg, 2006; Lacina, 2007; Wood, Quitadamo, DePaepe, & Loverro, 2007). Although a few publications have provided tips for designing effective WebQuests, they have focused on the technical rather than curricular aspects of design (Lipscomb, 2003; MacGregor & Lou, 2004). One exception is Ikpeze and Boyd's (2007) analysis of a WebQuest on the environment. The authors focused on technical as well as curricular aspects by observing and responding to six 5th graders as they worked through the WebQuest. They identified the extent of students' distractibility, information overload, and difficulty of navigation between WebQuests and website

resources. Ikpeze and Boyd recognized that skills related to Internet use needed to be integrated into the WebQuest unit; they added instruction in comprehension strategies, such as chunking, skimming, and scanning Internet texts, as they revised the WebQuest. Another feature Ikpeze and Boyd added was students' evaluation of the quality of the websites they encountered and the sources they included. Students were asked to consider sources, their date of publication, and the authors' purposes. Finally, Ikpeze and Boyd suggested that teachers preview links to other websites before including them as resources when designing their own WebQuests.

Perkins and McKnight (2005) also urged teachers to evaluate the WebQuests' curricular elements *before* using them in the classroom. In a survey study examining the perceptions of K–12 teachers, teacher-educators, and school district administrators about WebQuests as an instructional strategy, Perkins and McKnight found that teachers expressed disappointment over the general quality of the WebQuests; they were especially critical toward rote tasks and complained about numerous errors and a general lack of planning. Similarly, Orme and Monroe's (2005) study of mathematics WebQuests also supports the need for more challenging tasks. They found that WebQuest tasks with embedded mathematical concepts produced more in-depth discussions among the students than tasks that focused solely on practicing procedural mathematical knowledge (Orme & Monroe, 2005).

Several researchers have also discussed how websites reinforce or resist mainstream cultural perspectives (Gorski, 2004; Warschauer, Knobel, & Stone, 2004), or reflect predominantly Anglo and middle class perspectives (Weeks, 2005). In fact, Weeks found that WebQuests generally avoided activities that encouraged discussion of race and ethnicity. Weeks also pointed out that resources for designing WebQuests were either not readily available for teachers or were often inadequate, including the rubrics recommended by March (2008) and Dodge (2001). None of the sources we retrieved addressed the development of WebQuests for ELLs. Both Ikpeze and Boyd's (2007) and Orme and Monroe's (2005) studies, for example, focused on "mainstream"—native-English speaking, Anglo—elementary students.

The Study

Given our focus on the learning opportunities for secondary students for whom English is an additional language, our inquiry arose from a desire to investigate whether existing WebQuests that met March's (2008) and Dodge's (2001) standards of quality contained elements that would make them appropriate for use with ELLs. In examining eight selected WebQuests, which were recommended for secondary classrooms, we found that in spite of being rated highly, most lacked the linguistic supports that ELLs are likely to need. Therefore, Sox designed a rubric to help educators focus on three elements of support for ELLs.

The main purpose of this rubric is to identify WebQuest features that are especially beneficial for ELLs and point out features that may hamper ELLs' comprehension. Sox grouped the elements of WebQuest design into three main features: linguistic, multimedia, and organizational (see Figure 2). Next, she provided specific strategies to improve each of the features, and last, she provided a rating for each of the three features on a scale of 1 (*ineffective*) to 4 (*very effective*). See the adapted rubric in Figure 2.

Linguistic Features

The rubric criteria for this category focused on the language used throughout the WebQuest. Because the WebQuest is a student-centered activity, it is essential that all directions be clearly and concisely written—especially for ELLs. One should avoid using flowery and convoluted language, opting instead for short sentences, simple tenses, and direct commands. Colloquialisms, phrasal verbs like *get together* and *think up* should also be avoided, as they are often not directly translatable from one language to another. WebQuests receiving a score of "4" for linguistic features, therefore, would contain language that predominantly, if not entirely, followed these guidelines.

Multimedia Features

The use of illustrations, graphic organizers, trade books, and audiovisual resources provide scaffolding, making the content information more easily accessible for ELLs (Echevarria et al., 2000). WebQuests were rated on whether the web resources incorporated video and audio clips, interviews, interactive maps,

Figure 2 Rubric for WebQuest Effectiveness for ELLs

	Very Effective (4)	Effective (3)	Somewhat Effective (2)	Ineffective (1)
Linguistic features	<p>Sentence structures consistently contain simple tenses, concise language.</p> <p>Colloquial language and phrasal verbs are almost never used.</p> <p>Indirect commands are not used. Instructions are clearly stated.</p>	<p>Sentence structures mostly contain simple tenses and concise language, although complex structures are used on occasion.</p> <p>Colloquial language and phrasal verbs are sometimes used.</p> <p>Indirect commands are sometimes used, but most instructions are clearly stated.</p>	<p>Sentence structures often contain complex tenses and wordy language, although simple structures are used on occasion.</p> <p>Colloquial language and phrasal verbs are sometimes used.</p> <p>Indirect commands are sometimes used, and several instructions are not clearly stated.</p>	<p>Sentence structures consistently contain complex tenses, and wordy language.</p> <p>Colloquial language and phrasal verbs are frequently used.</p> <p>Indirect commands are frequently used, and most instructions are not clearly stated.</p>
Multimedia features	<p>All visuals are strategically placed to aid in understanding of text and directions.</p> <p>Linked Websites present information multimodally (video, audio, interactive graphics, etc.) that is not easily found in traditional print resources.</p> <p>Linked Websites represent different sources and perspectives of the topic.</p> <p>First language (L1) support (ex. Online bilingual dictionary) is included as part of the resource list.</p>	<p>Most visuals are strategically placed to aid in understanding of text and directions.</p> <p>Most linked Websites present information multimodally and/or provide relevant information that is not easily accessible in traditional print resources.</p> <p>Most linked Websites represent different sources or different perspectives of the topic.</p> <p>L1 support is provided on individual websites, but not as part of the WebQuest itself.</p>	<p>Several of the visuals are irrelevant to the text and directions.</p> <p>A few linked Websites present information multimodally and/or provide information that is not easily accessible in traditional print resources.</p> <p>A few linked Websites represent different sources or different perspectives of the topic.</p> <p>L1 support is not provided on the WebQuest or in the linked Websites.</p>	<p>While visuals may be present, they do not aid in the understanding of the text and directions.</p> <p>Most linked Websites present information in ways that are similar to traditional print resources.</p> <p>Most linked Websites come from the same source, and they provide only one perspective of the topic.</p> <p>L1 support is not provided on the WebQuest or in the linked Websites.</p>
Organizational features	<p>Font formatting (color, style, size, etc.) is consistently used to focus the reader on key concepts, directions, and other elements of the WebQuest.</p> <p>Relevant resource links are provided throughout the steps of the process and a brief description of other information about each site is included with the link.</p> <p>Paragraph formatting is consistently utilized to chunk information and focus the reader's attention on key information.</p>	<p>Font formatting is often used to focus the reader on key concepts, directions, and other elements of the WebQuest.</p> <p>Relevant resource links are provided throughout the steps of the process or a brief description or other information about each site is included with the link.</p> <p>Paragraph formatting is often utilized to chunk information and focus the reader's attention on key information.</p>	<p>Font formatting is sometimes used to focus the reader on key concepts, directions, and other elements of the WebQuest.</p> <p>There are a few attempts to organize relevant resource links or provide scaffolding for resource links in the WebQuest.</p> <p>Paragraph formatting is occasionally utilized to chunk information and aid in understanding text and directions.</p>	<p>Font formatting is rarely used to focus the reader on key concepts, directions, and other elements of the WebQuest.</p> <p>Resource links are listed in a central location separate from the WebQuest process page. Little, if any, information is provided to aid the student in selecting relevant resources.</p> <p>Paragraph formatting is rarely utilized to chunk information or to aid in the understanding of text and directions.</p>

and so forth, which would enhance access to information for ELLs. In addition, the authors recognized Web resources that provide first-language support, including online bilingual dictionaries and sites with content in multiple languages. Finally, the use of visuals, including clip art and downloadable photographs appearing on the WebQuest, was considered. Careful placement of visuals to enhance comprehension of the instructions or key vocabulary used in the WebQuest is also important for improving comprehension for ELLs. Photographs and clip art can be used to build the background knowledge of ELLs as well. Thus, a WebQuest that received a “4” on the adapted rubric would include access to multiple modes of information and make the most of Internet resources, and would include only those photos and visuals that were specifically relevant to the completion of the cumulative product.

Organizational Features

Adapting texts by chunking information, highlighting content vocabulary and words essential to understanding directions, as well as by providing graphic organizers for note-taking and planning the final product, help to improve comprehension of ELLs in the classroom (Chamot & O’Malley, 1994; Echevarria & Graves, 2007). Organizing the text throughout a WebQuest can be easily accomplished by adding spaces between paragraphs and numbering or bulleting key information. Using different sizes and formatting options for fonts should also be used to call attention to important content vocabulary and key information within the instructions of the WebQuest. Providing scaffolding for the web resources should also be included.

ELLs’ learning can be scaffolded by including a brief description of what they would be likely to find on the site next to each link and by adding links to the most relevant websites for each step of the process throughout the WebQuest, rather than by listing them on a separate page. Finally, it is important to ensure that all links are current and that they lead students directly to the page with the appropriate information. This is an essential part of the organization of the WebQuest. Without it, students will likely waste time surfing irrelevant information or encounter

the frustration of dead or incorrectly typed links. Although this aspect of organization is beneficial for all students, it is crucial for ELLs, who may have difficulty understanding all the information on a site because of their level of English proficiency. Therefore, a WebQuest that received a “4” on the adapted rubric would use formatting features consistently to highlight key concepts, aspects of the instructions, and for breaking the text into smaller, more manageable pieces. In addition, resources would be organized to facilitate the completion of the task throughout the steps of the process.

Summary of the Findings

Each of the eight WebQuests reviewed met the standards for quality set out by either Dodge (2001) or March (2008). However, our analysis revealed potential concerns pertaining to the linguistic, multimedia, and organizational features and their appropriateness for meeting the needs of ELLs. The eight WebQuests selected for the study are described in Table 1.

Linguistic Features. Most WebQuests contained language that may have been convoluted or ambiguous to ELLs. The majority contained instructions that used complex sentence structures. A common practice, for example, was to begin sentences with prepositional or transitional phrases, or lengthy dependent clauses. For example, in one WebQuest, *For Love of the Game?*, the author begins several directions with *after reading*, *before investigating*, *at the end of*, and similar phrases, which are extraneous, and which do not include information essential to the particular directions they introduce. Furthermore, by coming at the beginning rather than at the end of the sentences, students must wade through the phrase before they can find the actual information about what they are to do next. Finally, these phrases often are attached to lengthy, wordy, dependent clauses, which in some cases are longer than the independent clause. WebQuests also frequently used indirect commands and phrasal verbs, such as *your job is* or *be sure to*. These may be confusing to ELLs because of their ambiguity; in fact, they may not even be recognized as directives. Phrasal verbs, like to *back up* one’s argument, are also problematic for ELLs because they cannot be translated literally. Several of the WebQuests also contained instructions

Table 1 Rubric for WebQuest Ratings Using the Rubric for Rating WebQuest Effectiveness for ELLs

WebQuest name	Grade level	Subject area(s)	Linguistic features	Multimedia features	Organizational features
<i>Youth Gangs</i>	11–12	Sociology	2	2	3
<i>Things Fall Apart</i>	10–12	Literature	3	3	4
<i>Globalization</i>	10–12	History/Social Studies Vocational Education	2	3	2
<i>Senior Trip</i>	9–12	Life Skills	3	2	3
<i>Johnny Tremain</i>	6–8	Language Arts Social Studies	2	3	2
<i>Desert Quest</i>	6–8	Life Sciences	1	1	2
<i>For Love of the Game?</i>	6–8	Language Arts Math	2	2	2
<i>Balancing Act: Grizzly Bear</i>	6–8	Science	2	2	3

that addressed multiple tasks in each step (information overload).

Multimedia Features. All eight WebQuests under review contained illustrations. They were typically limited to one illustration per page and mainly provided context related to the topic. However, in one WebQuest, *Senior Trip*, illustrations were included next to the description of each student role, clarifying the focus of each role. One WebQuest, *Desert Quest*, contained only one illustration that was not directly related to the topic.

The resources included on each of the WebQuests provided a variety of information, most of which would not be easily retrievable in traditional print sources. For example, two WebQuests included video clips and interactive quizzes for students to test their background knowledge and comprehension; another included access to audio clips. One WebQuest for the novel *Johnny Tremain* also included links to sources that contained actual copies of the Declaration of Independence, period engravings, and sites that presented the American Revolution—the setting of the novel—from the perspective of the British as well as the colonists. However, most of the linked websites were text heavy, without visual support to help the

comprehensible input for ELLs. Information on some sites was also repetitive. Furthermore, none of the WebQuests provided first-language support, either via online bilingual dictionaries, via sites that had translation capabilities, or even by simply pointing out possible English/Spanish cognate pairs, such as *president/presidente*, *hurricane/huracán*, and *desert/desierto*.

Organizational Features. All eight of the WebQuests under review used mechanisms such as spaces, tabs, bulleting, and numbering to chunk the text. With the exception of two WebQuests (*For Love of the Game?* and *Globalization*), however, key content vocabulary was not explained, although most of the key terms that related to completion of the task were highlighted. Each WebQuest also contained features that scaffolded the learning process. For example, two WebQuests contained note-taking sheets or graphic organizers to help students during the research process. Often, relevant links were listed immediately after the instructions for a particular step. One WebQuest, *For Love of the Game?*, provided a brief description of the sites in addition to providing the links. Unfortunately most of the WebQuests reviewed had navigability issues that would likely be problematic for ELLs. Several linked to homepages rather than the site with the desired

information. Most WebQuests also provided links that were either inoperative or required rerouting.

Discussion

Although the WebQuests examined here did include some linguistic, multimedia, and organizational elements that were beneficial for ELLs, none made consistent use of the elements presented in this article. As a result, the WebQuests reviewed could not be considered models for use with ELLs without at least some level of adaptation. Therefore, we provide suggestions on how to adapt ready-made WebQuests to accommodate the needs of ELLs as well as suggestions on how to design WebQuests with ELLs in mind.

Adapting Existing WebQuests for ELLs

WebQuests that meet the quality standards for design according to the Dodge (2001) and March (2008) rubrics are not likely to have been designed with ELLs in mind. With this in mind we provide a few sheltered instructional strategies to support and enhance the engagement of ELLs in WebQuest tasks. For example, integrating flowcharts, graphic organizers, and other visual displays can help convey the steps students need to take to complete the cumulative product. These accompanying visuals should be accessible to students alongside the instructions. Another suggested adaptation for ELLs is to have a student read the text out loud and tape record it for others to listen to as they read (Echevarria & Graves, 2007). Also, if the text is too dense for some of the ELLs in the classroom, the teacher may summarize the text and lower the linguistic load by using synonyms with which their students may be more familiar (Echevarria & Graves, 2007). In addition, a supplemental checklist for students to complete during each step of the process can also be helpful for ELLs to monitor their trajectories and progress. Finally, previewing and highlighting key vocabulary across a particular WebQuest, or assigning students the task of highlighting vocabulary that is unfamiliar to them, are likely to enhance their comprehensible input (Krashen, 1980). Further strategies include providing cognate pairs (in Spanish) when appropriate, compiling a list of synonyms, and alerting students to particular homonyms. With the permission of WebQuests' original authors, educators

may add or revise existing WebQuests to incorporate these strategies.

Other supplemental resources can also be provided in WebQuests to accommodate the needs of ELLs; these may include online bilingual dictionaries, illustrated encyclopedias, and resources in the students' first language. Educators can bookmark the sites or paste the links to a word document that the students can access. Educators can also provide or assign brief summaries of the kind of information students are likely to find on each site.

Designing WebQuests With ELLs in Mind

Careful consideration of the resources, visual elements, instructions, and content standards with ELLs in mind throughout the design process will result in a WebQuest that not only meets the standards of quality in Dodge's (2001) or March's (2008) rubric but also the linguistic, multimedia, and organizational standards outlined in our adapted rubric. Therefore, prior to designing their own WebQuest, educators should take the time to critically review WebQuests that have already been posted by others, using these rubrics to attend to the particular aspects of quality outlined in them. However, once educators are ready to create their own WebQuest, they should consider the types of resources, the use of visual elements, and the wording of the instructions throughout the design process. The following are some specific tips.

Resource Links. WebQuests should have a variety of informative and relevant websites for students to access. These websites should provide information not readily found in textbooks or other print materials. They should also present information in innovative ways and from different perspectives. Using one site, no matter how exceptional, is not sufficient. Websites such as www.nationalgeographic.com, www.bbc.co.uk, and www.pbs.org, can be great resources for information presented in multiple modalities. Many popular magazines have their own websites that can serve as additional resources; students can access interviews, video clips, and articles published in print media. Many museums, zoos, and botanical gardens also have websites with excellent information and links. Although it may take time to sort through the plethora of sites on

the World Wide Web, planning for such linkages is a crucial aspect when designing a WebQuest.

It is also important that the provided links take students directly to the page they are expected to access. Sorting through homepages filled with advertisements is a waste of valuable classroom time and is also extremely frustrating for students—especially for ELLs. Moreover, students who are acquiring and developing English competencies may have difficulty selecting the appropriate keywords for accessing search engines effectively. One of the main purposes for using WebQuests is, after all, to narrow the search to maximize the relevance, comprehensible input, and efficacy of students' Internet researches.

Visual Elements. The illustrations, graphics, and overall visual appeal of actual WebQuests are extremely important. Although too many visuals can be overwhelming and detract from the “meat” of the WebQuest, those visuals that are carefully thought through not only make a WebQuest more interesting but also improve the understanding of information presented for ELLs. Visuals should be selected and placed appropriately so that they effectively contextualize or illustrate instructions, key concepts, and important information.

Clear Instructions. Concise and clear language is essential for directions; therefore, active tenses and direct statements are highly desired. Flowery language, complex structures, and phrasal verbs should be avoided. The following suggestions are likely to make directions more comprehensible for ELLs:

1. Post each step of the process on a separate page. It will help the student to chunk the process into smaller, more manageable pieces.
2. Provide scaffolding for the resource links. All of the WebQuests reviewed in this study included links to resources in the process section of the WebQuests. A brief description of the contents, or graphic organization, also would help ELLs find information they need more efficiently.
3. Highlight or distinguish key content vocabulary in the directions by using different fonts and formatting features (e.g., boldface,

underline, italics), or by using the highlight feature on the WebQuest.

4. Provide opportunities to create read-alouds using text-to-speech software and digital audio recording capability. This is especially helpful for ELLs whose auditory proficiency may be their stronger linguistic mode.

Connection to Content Standards. Although this article did not focus specifically on the development of the WebQuest task, both authors believe that it is important to discuss the connection of the WebQuest task to content standards. WebQuests are learning units and, as such, should be designed with clear content objectives. However, it is not enough to know the WebQuest's relevance to content standards; one must also ensure that students are aware of its purpose. Unfortunately, only one of the WebQuests under review specifically linked the final product to state content standards on the student introduction page. All others relegated the content standard statements to the teacher page that accompanied the WebQuest. Like the inclusion of chapter objectives in a textbook, content standards in the introduction of the WebQuest would provide students with a preview of the kinds of competencies, tasks, and information they are likely to encounter. Expectations regarding standards should be explicitly stated for the student and should be accessible throughout the completion of the WebQuest. Although this is an essential element of any curriculum planning task, we found that it was often overlooked—not only across the eight WebQuests reviewed but also in the broad spectrum of WebQuests posted on the Internet.

Final Thoughts About Using WebQuests With ELLs

Although WebQuests provide opportunities for integrating technology, content knowledge development, and linguistic accommodation for diverse learners, especially ELLs, their use as instructional tools has yet to be fully used. We contend that even WebQuests that are rated highly for content may lack design features that address the needs of ELLs. Existing WebQuests rarely provide resource links to alternative modalities (audio/video), nor do they provide resources to access

or build on ELLs' linguistic and cultural background knowledge. Therefore, we argue that the quality standards for WebQuests set by Dodge (2001) and March (2008), as per the rubrics and supplemental information on their Web Portals, do not necessarily make the most of the Web-based capabilities or include essential elements for addressing the needs of ELLs.

Even minor adaptations can help existing WebQuests to meet the needs of ELLs. On the process page, one can provide the appropriate scaffolding by making instructions clear and breaking down the final product into incremental steps. The collaborative activities required to complete the WebQuest task can give ELLs opportunities to participate and develop content knowledge and communicative competence in English. Multimedia features found on linked Web resources can provide ELLs with access to alternative texts, additional visual aids, and audio input. Arguably, one of the greatest strengths of the WebQuest is that it can scaffold Internet searches for students, rendering their searches more efficient and effective.

We have suggested several ways in which WebQuests can develop language proficiency and facilitate students' proficiency in information communication technologies and critical literacies, as suggested by the International Reading Association's (2001) position statement. We have also advocated for WebQuests that "challenge simple cultural interpretations" (Bean, 2002, p. 36) and encourage students "to go beyond pat responses" (p. 37). Including opportunities for small-group work, oral discussions, and debates throughout the process, and using websites that represent multiple perspectives and sources are two ways educators may begin to challenge stereotypes and develop more critical thinking.

In sum, we contend that WebQuests not only have the potential to encourage ELLs' exposure to a variety of sources but also can encourage students to question the validity, authority, relevance, and particular agendas across multiple sources. The use of adapted and customized WebQuests in the secondary curriculum is likely to help ELLs develop the required competencies suggested in the adolescent literacy position statement (Moore, Bean, Birdsyshaw, & Rycik, 1999), by integrating content knowledge and academ-

ic language proficiency as well as technological and critical literacy competencies.

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Sox is a doctoral student at the University of Arizona, Tucson, USA; e-mail asox@email.arizona.edu.

Rubinstein-Ávila teaches at the University of Arizona; e-mail rubinste@email.arizona.edu.

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